UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,174	11/14/2003	Karl E. Benson	58627US002	9810

32692 7590 01/31/2006

3M INNOVATIVE PROPERTIES COMPANY
PO BOX 33427
ST. PAUL, MN 55133-3427

EXAMINER	
SHIAO, REI TSANG	

ART UNIT	PAPER NUMBER
1626	

DATE MAILED: 01/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/713,174	BENSON ET AL.	
	Examiner	Art Unit	
	Robert Shiao	1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *responses filed on 11/28, 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) *13-35* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

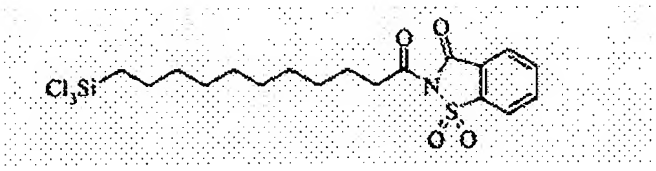
1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *03/04/04, 07/20/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-35 are pending in the application.

Responses to Election/Restriction

2. Applicant's election with traverse of Group II claims 1-12, in part, in the reply filed on November 28, 2005, is acknowledged. The elected compound of Example 11, i.e.,



, as the single species is also acknowledged. The traversal is on the ground(s) that the instant compounds of Group II is novel, the methods of immobilizing these novel compounds to a substrate as recited in claims 23-26 should also be novel, and no further searching would be required to determine the novelty of claims 13-26. This is not found persuasive, and the reasons are given, *infra*.

Status of the Claims

3. Claims 1-35 are pending in the application. The scope of the invention of the elected subject matter is as follows.

Claims 1-12, in part, drawn to compounds of formula (I), wherein the heterobicyclic group having a nitrogen and a sulfur atom thereof, and formed by variables R^a and R^1, represents a benzisothiazol or benzothiazole moiety thereof; and the variables R^b and R^c together with the nitrogen atom to which they are attached do not form a heterocyclic or heterobicyclic group thereof.

The instant claims 13-22, drawn to another products (i.e., polyester film), and claims 23-35, drawn to processes of making conjugated DNA, RNA or protein, belong to distinct invention (i.e., classified in class 436). They differ materially in structure and composition from instant claimed compounds and have been restricted properly.

The above mentioned withdrawn heterocyclic compounds or other products (i.e., polyester film) which are withdrawn from consideration as being for non-elected subject matter differ materially in structure and composition from the compounds of the elected invention. The withdrawn compounds/compositions contain varying heterocycle or heteroaryl of the variables R^a and R^1 of the formula (I) having 1,3-thiazine or 3,4-duhydro-2H-benzo[e][1,4]thiazine moiety, or processes of making of conjugated DNA, RNA or protein, which differ from those of the elected invention compounds having a benzisothiazol moiety, which are chemically recognized to differ in structure and function. This recognized chemical diversity of the functional groups can be seen by the various classifications of these functional groups in the U.S. classification system, i.e., class 544, subclass 53(+) (1,3-thiazine); class 544, subclass 51(+) (3,4-duhydro-2H-benzo[e][1,4]thiazine), etc. Therefore, again, the compounds which are withdrawn from consideration as being for non-elected subject matter differ materially in structure and composition and have been restricted properly.

The group set forth in the claims includes both independent and distinct inventions, and patentably distinct compounds (or species) within each invention. However, this application discloses and claims a plurality of patentably distinct

inventions far too numerous to list individually. Moreover, each of these inventions contains a plurality of patentably distinct compounds, also far too numerous to list individually. Moreover, the examiner must perform a commercial database search on the subject matter of each group in addition to a paper search, which is quite burdensome to the examiner.

Claims 1-12, in part, embraced in above elected subject matter, are prosecuted in the case. Claims 1-12, in part, not embraced in above elected subject matter, and claims 13-35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention.

The requirement is still deemed proper and is therefore made **FINAL**.

Claim Rejections - 35 USC § 102

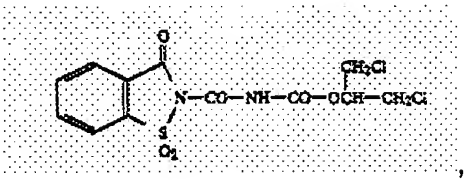
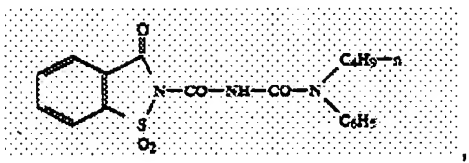
4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by (1) Salzburg et al. US 4,713,389; (2) Brown et al. US 2,995,542; (3) Luheshi et al. publication, Tetrahedron Letters, 31(45), page 6561-6564; (4) Hashimoto et al. JP 03157360, also see CAS: 115:207678; (5) Chiyomaru et al. JP 47043332, see CAS: 78:144282; (6) Kato et al. publication, Yuki Gosei Kagaku Kyokaishi (1972), 30(10),

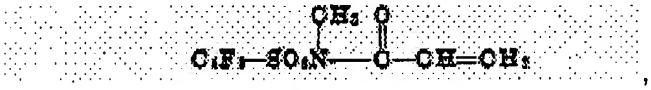
897-9, also see CAS: 78:124224; (7) Chiyomaru et al. JP 49020779, see CAS: 82:140119; (8) Chiyomaru et al. JP 47020158, see CAS: 77:164667; (9) Mine et al. JP 46036613, see CAS : 76:14533; (10) Mandel'baum et al. publication, Khimicheskie Sredstva Zashchity Rastenii (1972), 2, 302-5, see CAS: 82:57814; (11) Iwakura et al. JP 54090117, see CAS : 92:41570; or (12) Schrader's DE 1152407, see CAS: 60:3301.

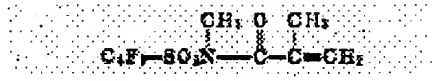
Applicants claim a compound of formula (I). The compound is found on the pages 2-61 of the specification.

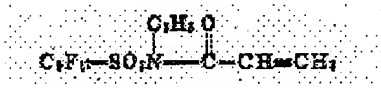
Salzburg et al. disclose two compounds, i.e.,  ,  , compound No. 5, or 11, see columns 7-9.

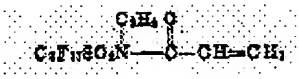
Salzburg et al. compounds clearly anticipate the instant compounds of formula (I), wherein the heterocyclic group formed by variables R^a and R^1 represents a benzisothiazol moiety; the variable Y^1 represents combination of $-NR^d$ (i.e, R^d is hydrogen), carbonyl, and oxy, i.e., Y^1 represents -NH-CO-O or –NH-CO; and the variable X^1 represents haloalkyl (i.e., $CH(CH_2Cl)_2$, CH_2CF_3 or CH_2Cl), or tertiary amino (i.e., $-N(C_4H_9)(C_6H_5)$, and the variable r is 1.

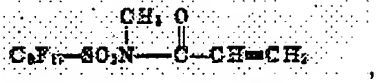
Brown et al. disclose seven compounds , i.e.,

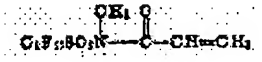

,

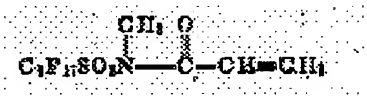

,


,


,


,


, and


, see columns 7-8. Brown et al. compounds clearly anticipate the instant compounds of formula (I), wherein the variable R^1 represents fluoroalkyl (i.e, C_4F_9 or C_8F_{17}); the variable Z1 represents alkyl (I.e., methyl, or ethyl); the variable Y^1 represents a single bond; and the variable X^1 represents ethylically unsaturated group (i.e., ethene), and the variable r is 1.

Luheshi et al. disclose a compound, i.e., see page 6562, compound No. (4), clearly anticipate the instant compounds of formula (I), wherein the heterocyclic group formed by variables R^a and R^1 represents a benzisothiazol moiety; the variable Y^1 represents an arylene (i.e., phenyl); and the variable X^1 represents azido; and the variable r is 1.

Hashimoto et al. disclose a compound, i.e., Acetamide, 2-chloro-N-[(2-chlorophenyl)sulfonyl]-N-propyl-, clearly anticipate the instant compounds of formula (I), wherein the variable R^1 represents aryl (i.e., phenyl); the variable Z1 represents alkyl (i.e., propyl); the variable Y^1 represents a single bond; and the variable X^1 represents haloalkyl (i.e.,$ClCH_2$-), and the variable r is 1.

Chiyomaru et al. '282 disclose two compound, i.e., 1,2-Benzisothiazol-3(2H)-one, 2-(1-oxo-2-propenyl)-, 1,1-dioxide, and 1,2-Benzisothiazol-3(2H)-one, 2-(4-chloro-1-oxobutyl)-, 1,1-dioxide, see RN: 41643-17-8 and 41643-15-6. Chiyomaru et al. compounds clearly anticipate the instant compounds of formula (I), wherein the heterocyclic group formed by variables R^a and R^1 represents a benzisothiazol moiety; the variable Y^1 represents a single bond; X^1 represents haloalkyl (i.e., $Cl(CH_2)_3$-) or ethylically unsaturated group (i.e., ethene), and the variable r is 1.

Kato et al. disclose a compound, i.e., 1,2-Benzisothiazol-3(2H)-one, 2-(2-methyl-1-oxo-2-propenyl)-, 1,1-dioxide, see RN: 40581-15-5. Kato et al. compound clearly anticipate the instant compounds of formula (I), wherein the heterocyclic group formed by variables R^a and R^1 represents a benzisothiazol moiety; the variable Y^1 represents a single bond; X^1 represents ethylically unsaturated group (i.e., propenyl), and the variable r is 1.

Chiyomaru et al. '119 disclose a compound, i.e., 1,2-Benzisothiazole-2(3H)-carboxylic acid, 3-oxo-, 2-chloroethyl ester,1,1-dioxide, see RN: 54952-63-5. Chiyomaru et al. compound clearly anticipate the instant compounds of formula (I), wherein the heterocyclic group formed by variables R^a and R^1 represents a benzisothiazol moiety; the variable Y^1 represents an oxy; X^1 represents haloalkyl (i.e., $(CH_2)_2Cl$), and the variable r is 1.

Chiyomaru et al. '667 disclose a compound, i.e., 1,2-Benzisothiazol-3(2H)-one, 2-(3-chloro-1-oxopropyl)-, 1,1-dioxide, see RN: 37952-91-3. Chiyomaru et al. compound clearly anticipate the instant compounds of formula (I), wherein the heterocyclic group formed by variables R^a and R^1 represents a benzisothiazol moiety; the variable Y^1 represents a single bond; X^1 represents haloalkyl (i.e., $(CH_2)_2Cl$), and the variable r is 1.

Mine et al. disclose four compounds, i.e., 1,2-Benzisothiazole-2(3H)-carboxamide, N,N-dimethyl-3-oxo-, 1,1-dioxide; 1,2-Benzisothiazole-2(3H)-carboxamide, 3-oxo-N,N-dipropyl-, 1,1-dioxide; 1,2-Benzisothiazole-2(3H)-carboxamide, N,N-dibutyl-3-oxo-, 1,1-dioxide; and 1,2-Benzisothiazole-2(3H)-carboxamide, 3-oxo-N,N-bis(phenylmethyl)-,1,1-dioxide, see RN: 35131-57-8, 35131-58-9, 35131-59-0, and 35131-60-3. Mine et al. compounds clearly anticipate the instant compounds of formula (I), wherein the heterocyclic group formed by variables R^a and R^1 represents a benzisothiazol moiety; the variable Y^1 represents a single bond; X^1 represents tertiary amino (i.e., $-N(Me)_2$, $-N(Pr)_2$, $-N(Bu)_2$, or $-N(CH_2\text{-}Ph)_2$), and the variable r is 1.

Mandel'baum et al. disclose three compounds, i.e., Phosphorothioic acid, O,O-dimethyl S-[1-methyl-2- [methyl(methylsulfonyl)amino]-2-oxoethyl] ester; Phosphorothioic acid, O,O-diethyl S-[1-methyl-2-[methyl(methylsulfonyl)amino]-2-oxoethyl] ester; and Phosphoramidothioic acid, dimethyl-, O-ethyl S-[1-methyl-2-[methyl(methylsulfonyl)amino]-2-oxoethyl] ester, see RN: 54905-17-8, 54905-18-9, and 54905-19-0. Mandel'baum et al. compounds clearly anticipate the instant

compounds of formula (I), wherein the variable R^1 represents alkyl (i.e., methyl); the variable Z1 represents alkyl (I.e., methyl); Y^1 represents combination of alkylene (i.e, CH-Me) and thio, i.e., Y^1 represents –CH(Me)-S; and the variable X^1 represents phosphono (i.e.,-P(O)-$(OMe)_2$ or -P(O)-$(OEt)_2$), and the variable r is 1.

Iwakura et al. disclose two compounds, Acetamide, 2-chloro-N-phenyl-N-(phenylsulfonyl)-; and Acetamide, 2-chloro-N-(methylsulfonyl)-N-phenyl-, see RN: 72310-04-4 and 72310-22-6. Iwakura et al. compounds clearly anticipate the instant compounds of formula (I), wherein the variable R^1 represents alkyl or aryl (i.e., methyl or phenyl); the variable Z1 represents aryl (i.e., phenyl); Y^1 represents a single bond, and the variable X^1 represents haloalkyl (i.e., CH_2Cl), and the variable r is 1.

Schrader discloses two compounds, i.e., Phosphorothioic acid, O,O-diethyl S-[2-[methyl(methylsulfonyl)amino]-2-oxoethyl] ester; and Phosphorothioic acid, O,O-dimethyl ester, S-ester with 2-mercapto-N-methyl-N-(methylsulfonyl)acetamide, see RN: 38995-02-7 and 89909-92-2. Schrader's compounds clearly anticipate the instant compounds of formula (I), wherein the variable R^1 represents alkyl (i.e., methyl); the variable Z1 represents alkyl (I.e., methyl); Y^1 represents combination of alkylene (i.e, CH_2) and thio, i.e., Y^1 represents –CH_2-S; and the variable X^1 represents phosphono (i.e.,-P(O)-$(OMe)_2$ or -P(O)-$(OEt)_2$), and the variable r is 1.

Claim1-12 are rejected under 35 U.S.C. 102(a) as being anticipated by Naumov et al. publication, Solid State Sciences (2002), 4(2), 271-283, also see CAS: 137:83888.

Applicants claim a compound of formula (I). The compound is found on the pages 2-61 of the specification.

Naumov et al. disclose a compound, i.e., 1,2-Benzisothiazole-2(3H)-carboxylic acid, 3-oxo-, 1,1-dioxide, see RN: 440671-29-4. Naumov et al. compound clearly anticipate the instant compounds of formula (I), wherein the heterocyclic group formed by variables R^a and R^1 represents a benzisothiazol moiety; the variable Y^1 represents a single bond; X^1 represents hydroxy, and the variable r is 1.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating

obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

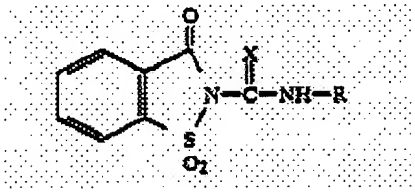
"Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Also see M.P.E.P. 2113.

6. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salzburg et al. US 4,713,389.

Applicants claim a compound of formula (I), and the compound is found on the pages 2-61 of the specification.

Determination of the scope and content of the prior art (MPEP §2141.01)

Salzburg et al. disclose a compound of formula (I),



, wherein the variable X represents oxygen, and the variable R represents –CO-R^1, and the variable R^1 represents halogenoalkyl, or –NR^3R^4, and R^3 and R^4 independently represents alkyl or phenyl. A number of compounds have been specifically exemplified, see columns 7-9.

Determination of the difference between the prior art and the claims (MPEP §2141.02)

The difference between instant claims and Salzburg et al. is that the variable Y^1 of instant compounds of formula (I) represents a bond or –NRd(i.e., Rd is hydrogen), while Salzburg et al. represents -NH at the same position.

Finding of prima facie obviousness-rational and motivation (MPEP §2142-2143)

One having ordinary skill in the art would find the claims 1-12 prima facie obvious because one would be motivated to employ the compounds of Salzburg et al. to obtain instant claimed compound of formula (I), wherein the heterocyclic group formed by variables R^a and R^1 represents a benzisothiazol moiety; the variable Y^1 represents combination of –NR^d (i.e, R^d is hydrogen), carbonyl, and oxy, i.e., Y^1 represents -NH-CO-O or –NH-CO; and the variable X^1 represents haloalkyl (i.e., $CH(CH_2Cl)_2$, CH_2CF_3 or CH_2Cl), or tertiary amino (i.e., $-N(C_4H_9)(C_6H_5)$, and the variable r is 1.

The motivation to make the claimed compounds derives from the expectation

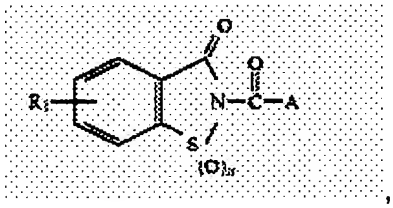
that the instant claimed compounds derived from known Salzburg et al.compounds would possess similar activities (i.e., agents for binding or treating bacteria) to that which is claimed in the reference.

7. Claims 1-12 are rejected under 35 U.S.C. 103(a) as obvious over Mulvey et al. US 4,195,023.

Applicants claim a compound of formula (I), and the compound is found on the pages 2-61 of the specification.

Determination of the scope and content of the prior art (MPEP §2141.01)

Mulvey et al. disclose a compound of formula (I),



, wherein the variable n is 2; and the variable R1 represents hydrogen; and the variable A represents C_{2-5} alkenyl, see columns 4-5. A number of compounds have been specifically exemplified, see columns 9-10.

Determination of the difference between the prior art and the claims (MPEP §2141.02)

The difference between instant claims and Mulvey et al. is that the variable Y^1 of instant compounds of formula (I) represents a single bond or –NRd(i.e., Rd is hydrogen), while Mulvey et al. represents a single bond at the same position.

Finding of prima facie obviousness-rational and motivation (MPEP §2142-2143)

One having ordinary skill in the art would find the claims 1-12 prima facie obvious because one would be motivated to employ the compounds of Mulvey et al. to obtain instant claimed compound of formula (I), wherein the heterocyclic group formed by variables R^a and R^1 represents a benzisothiazol moiety; the variable Y^1 represents a single bond; and the variable X^1 represents ethylically unsaturated group (i.e., propenyl), and the variable r is 1.

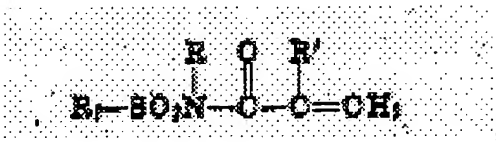
The motivation to make the claimed compounds derives from the expectation that the instant claimed compounds derived from known Mulvey et al. compounds would possess similar activities (i.e., agents for binding or treating enzyme) to that which is claimed in the reference.

8. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. 2,995,542.

Applicants claim a compound of formula (I), and the compound is found on the pages 2-61 of the specification.

Determination of the scope and content of the prior art (MPEP §2141.01)

Brown et al. disclose a compound of formula (I),



, wherein the variable R represents alkyl; the variable R' represents hydrogen or methyl, and the variable Rt represent perfluorocarbon group containing 4 to 18 carbon atoms, see columns 7-8.

A number of compounds have been specifically exemplified, see columns 7-8.

Determination of the difference between the prior art and the claims (MPEP §2141.02)

The difference between instant claims and Brown et al. is that the variable Y^1 of instant compounds of formula (I) represents a single bond or –NRd(i.e., Rd is hydrogen), while Brown et al. represents a single bond at the same position.

Finding of prima facie obviousness-rational and motivation (MPEP §2142-2143)

One having ordinary skill in the art would find the claims 1-12 prima facie obvious because one would be motivated to employ the compounds of Brown et al. to obtain instant claimed compound of formula (I), wherein the variable R^1 represents fluoroalkyl (i.e, C_4F_9 or C_8F_{17}); the variable Z1 represents alkyl (I.e., methyl, or ethyl); the variable Y^1 represents a single bond; and the variable X^1 represents ethylically unsaturated group (i.e., ethene), and the variable r is 1.

The motivation to make the claimed compounds derives from the expectation that the instant claimed compounds derived from known Mulvey et al. compounds would possess similar activities (i.e., agents for binding or treating polymer) to that which is

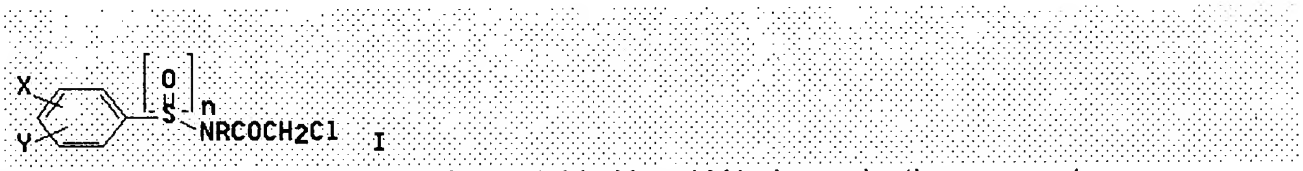
claimed in the reference.

9. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto et al. JP 03157360, also see CAS: 115:207678.

Applicants claim a compound of formula (I), and the compound is found on the pages 2-61 of the specification.

Determination of the scope and content of the prior art (MPEP §2141.01)

Hashimoto et al. disclose a compound of formula (I),



I

, wherein the variable n represents 2; the variable X and Y independently represent hydrogen; the variable R represents alkyl, see DN:115:207678. A compound has been specifically exemplified, see RN:136941-39-4.

Determination of the difference between the prior art and the claims (MPEP §2141.02)

The difference between instant claims and Hashimoto et al. is that the variable Y^1 of instant compounds of formula (I) represents a bond or –NRd(i.e., Rd is hydrogen), while Hashimoto et al. represents a bond at the same position.

Finding of prima facie obviousness-rational and motivation (MPEP §2142-2143)

One having ordinary skill in the art would find the claims 1-12 prima facie obvious because one would be motivated to employ the compounds of Hashimoto et al. to obtain instant claimed compound of formula (I), wherein the variable R^1 represents aryl (i.e., phenyl); the variable Z1 represents alkyl (i.e., propyl); the variable Y^1 represents a single bond; and the variable X^1 represents haloalkyl (i.e.,$ClCH_2$-), and the variable r is 1.

The motivation to make the claimed compounds derives from the expectation that the instant claimed compounds derived from known Hashimoto compounds would possess similar activities (i.e., agents having biological activity or effector) to that which is claimed in the reference.

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double

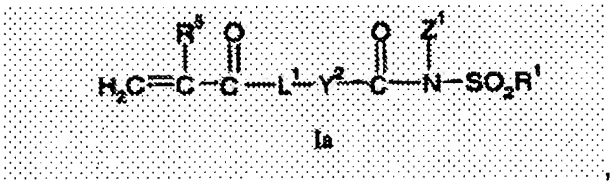
patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 1-12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 40, and 42-43 of Benson et al. co-pending application No. 10/987,522, see US 2005/0112672 A1. Although the conflicting claims are not identical, they are not patentably distinct from each other and reasons are as follows.

Applicants claim compounds of formula (I) as immobilizing agents, see claims 1-12. The instant compounds have been found on pages 2-61 of the specification.

Benson et al. claim compounds of formula (Ia) as immobilizing agents,



Ia

, wherein Z1 represents $-(CO)R^a$ where R^a together with R^1 and groups to which they are attached form a four to eight membered heteroyclic or heterobicyclic group having a nitrogen heteroatom and a sulfur heteroatom, wherein said heteroyclic or herterobicyclic group can be fused to an optional aromatic group, i.e., a benzisothiazol moiety; the variable Y2 represents a

single bond, oxy and alkylene or combination thereof; the variable L1 represents oxy. A number of compounds have been specifically exemplified, see columns 27-28.

The difference between instant claims and Benson et al. is that the variable Y^1 of instant compounds of formula (I) represents a single bond or carbonyl, while Benson et al. represents a carbonyl, i.e., C=O, at the same position.

One having ordinary skill in the art would find the claims 1-12 prima facie obvious because one would be motivated to employ the compounds of Benson et al. as immobilizing agents to obtain instant claimed compounds of formula (I), wherein the heterocyclic group formed by variables R^a and R^1 represents a benzisothiazol moiety; the variable Y^1 represents a single bond or combination of oxy, carbonyl and alkylene; and the variable X^1 represents ethylically unsaturated group (i.e., $H_2C=C-R^5$), and the variable r is 1.

The motivation to make the claimed compositions derives from the expectation that the instant claimed compounds derived from known Benson et al. compounds would possess similar activities (i.e., immobilizing agents) to that which is claimed in the reference.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Objection

12. Claims 1-12 are objected to as containing non-elected subject matter, i.e., heterocyclic group. It is suggested that applicants amend the claims to the scope of the

elected subject matter as defined on the page 2 *supra*.

Telephone Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Shiao whose telephone number is (571) 272-0707. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane can be reached on (571) 272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joseph K. McKane
Supervisory Patent Examiner
Art Unit 1626

Robert Shiao, Ph.D.
Patent Examiner
Art Unit 1626

January 19, 2006